

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

ALIGN TECHNOLOGY, INC.,

Plaintiff,

v.

CLEARCORRECT OPERATING, LLC,
CLEARCORRECT HOLDINGS, INC.,
& INSTITUT STRAUMANN AG,

Defendants.

Civil Action No. 6:24-cv-00187-ADA-DTG

JURY TRIAL DEMANDED

CLEARCORRECT OPERATING, LLC,
CLEARCORRECT HOLDINGS, INC.,
& STRAUMANN USA, LLC,

Counterclaim-Plaintiffs,

v.

ALIGN TECHNOLOGY, INC.,

Counterclaim-Defendant.

CLEARCORRECT'S CLAIM CONSTRUCTION REPLY BRIEF

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TABLE OF ABBREIVATIONS

Term	Abbreviation
ClearCorrect Holdings, Inc., ClearCorrect Operating, LLC, Institut Straumann AG, and Straumann USA, LLC	ClearCorrect
Align Technology, Inc.	Align
Dkt. 121 – Defendants’ and Counterclaim-Plaintiffs’ Opening Claim Construction Brief	CC Br.
Dkt. 136 – Align Technology, Inc.’s Responsive Claim Construction Brief	Align Br.
Dkt. 1-5 – U.S. Patent No. 8,038,444	’444 patent
Dkt. 1-6 – U.S. Patent No. 10,524,879	’217 patent
Dkt. 1-7 – U.S. Patent No. 10,524,879	’879 patent
Dkt. 1-8 – U.S. Patent No. 11,369,456	’456 patent
Dkt. 1-9 – U.S. Patent No. 10,791,936	’936 patent
Collectively, the ’444, ’217, ’879, and ’456 patents	Treatment Planning Patents
Dkt. 121-7 – Exhibit F: Expert Declaration of Dr. William Harrell, Jr. DMD in Support of ClearCorrect’s Opening Claim Construction Brief	Harrell Decl.
Dkt. 121-8 – Exhibit G: Expert Declaration of Zixian Xiong, Ph.D. in Support of ClearCorrect’s Opening Claim Construction Brief	Xiong Decl.
Dkt. 136-2 – Exhibit 1: Declaration of Eric Kuo, DDS	Kuo Decl.
Dkt. 136-3 – Exhibit 2: Declaration of Karan Sing, PhD in Support of Align’s Responsive Claim Construction Brief	Singh Decl.

I. THE TREATMENT PLANNING PATENTS

A. “through at least one of staggering and roundtripping of at least one dental object”

ClearCorrect’s proposed construction carefully follows the claim language and matches precisely how Align characterized this claim term in the prior IPR. Ex. B at 9-10. Align now tries to run from both the claim language and its own prior statements, but each of its arguments fails.

The plain language of the claim—“through at least one of staggering *and*¹ round-tripping of at least one dental object”—is clearly conjunctive: Align used “and,” not “or.” Align nevertheless argues that the term “should be construed disjunctively,” citing a specification passage stating that staggering and round-tripping “can be suitably applied *alone or in combination, and in any order.*” Align Br. 3 (citing ’444 patent, 12:41-57). But since the specification discloses using staggering and round-tripping *either* “alone” (disjunctively) or “in combination” (conjunctively), a patent claim could likewise be either disjunctive or conjunctive. The specification thus cannot be used to override the conjunctive claim language.

Align next attacks ClearCorrect’s reliance on the Federal Circuit’s decision in *SuperGuide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870 (Fed. Cir. 2004), where the court interpreted similar language—a claim term that recited “at least one of” followed by a conjunctive list of categories—conjunctively. Align Br. 4-5. Align cites two lower-court cases for the proposition that *SuperGuide* “did not create a ‘per se rule that the use of “at least one of” followed by “and” connotes a conjunctive list.’” *Id.*, 4. But the Federal Circuit’s primary rationale in *SuperGuide* was the plain grammar of the claim language, which is the same as the grammar here. *See SuperGuide*, 358 F.3d at 886 (“Applying this grammatical principle here, the phrase ‘at least one of’ modifies each member of the list, i.e., each category in the list. Therefore, the district court

¹ All emphases are added unless otherwise noted.

correctly interpreted this phrase as requiring that the user select at least one value for each category...”). The Federal Circuit “further conclude[d]” that “nothing in the specification *rebut*s the presumption that the ... patentee intended the plain and ordinary meaning,” (*id.* at 887), but the same is true here. As explained above, the ’444 specification supports either a conjunctive or disjunctive reading, so it cannot override the claim’s plain and ordinary meaning.

Align correctly notes (Br. 3-4) that ClearCorrect’s IPR petition argued for a broader disjunctive reading, but ClearCorrect was entitled to do so based on the then-applicable broadest reasonable interpretation (BRI) claim construction standard used in IPRs. Indeed, ClearCorrect expressly stated in its IPR petition that it was “appl[ying] the [BRI] standard ... although this may be, and often is, different from a claim construction in district court.” Ex. W at 14. Align, by contrast, has no justification for its different position here. Align’s brief does not even acknowledge that it told the PTAB that “a person having ordinary skill in the art ... would have understood” that the term required “the assessment of *both* ‘staggering’ and ‘round-tripping.’” Ex. B, 9-10. A party that argues for one construction under the BRI standard cannot logically argue for an even broader construction under the narrower *Phillips* standard here.

Finally, Align argues it would be “inequitable” to apply prosecution disclaimer here, because the PTAB ultimately rejected Align’s conjunctive interpretation. Align Br. 5. But the district court cases Align cites are in tension with Federal Circuit case law.² Moreover, even apart from prosecution disclaimer, the gamesmanship in Align’s positions—arguing for a narrow construction under a broad interpretation standard and a broad construction under a narrow

² See, e.g., *Springs Window Fashions LP v. Novo Industries, L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003) (“Because an examiner has the duty to police claim language by giving it the broadest reasonable interpretation, it is not surprising that an examiner would not be satisfied with the applicant’s insistence that particular claim language distinguishes a prior art reference, but that a court would later hold the patentee to the distinction he pressed during prosecution.”).

interpretation standard—is obvious and weighs against Align’s position here. Moreover, there is nothing “inequitable” about holding Align to its prior statements. The concern mentioned in the *Power Integrations* case Align cites was that a patentee could unfairly lose on invalidity at the PTO because of a broad construction while also losing on infringement in district court because of a narrow construction. But there is absolutely no such danger here because the PTAB **rejected** the IPR, so Align suffered no harm from the PTAB’s broader construction in the IPR.

B. “an optimal number of stages for the order of movement of the dental objects”

Align doubles down on the error that ClearCorrect identified in Align’s construction: Align tries to save claims 5, 19, and 33 by importing into the claims a limitation from dependent claims 6, 20, and 34 and from a particular specification embodiment. CC Br. 12-13.

Claims 5, 19, and 33 are bare bones: they recite only that the computer must determine “an optimal number of stages for the order of movement.” These claims provide nothing to determine whether the number of stages is “optimal.” As the PTO Examiner analyzing a related Align patent found, “optimal” “is a term of degree as applied to orthodontics,” and it is “unclear what may be considered an ‘optimal number’ of stages in orthodontic treatment.” Ex. D, 5.³

Recognizing this ambiguity, Align reaches into *other* claims and the specification to try to find *some* method that would allow a party to ascertain whether it infringes. Align cites the specification and states that “[t]he patent explains that the ‘optimal number of stages’ is the ‘largest number of the minimum stages needed to place the patient’s teeth in their final, desired position.’” Align Br. 7 (citing ’444 patent, 15:9-12). But Align omits key language from that passage, which reads in full, “***In another exemplary embodiment***, the optimum number of stages is the largest

³ Align has no meaningful response to this Examiner rejection other than to say that Align did not agree with it. Align Br. 11-12. But Align never even tried to rebut the Examiner’s detailed argument during the prosecution, and it notably still does not attempt do so in its brief here.

number of the minimum stages needed to place the patient’s teeth in their final, desired position.”
'444 patent, 5:9-12. Align’s supposed definition of “optimal” is thus merely an embodiment.

Align makes the same legal error again when it addresses the ambiguity of its own construction—i.e., how to determine what is “the largest number of minimum stages”? Align says the patent “explains how to determine the minimum number of stages” and points to Figure 11, which Align says “depicts a flow chart with these steps leading to a determination of ‘optimal number of stages.’” Align Br. 7. But the patent is clear that Figure 11 is merely “a flow diagram of *one exemplary embodiment* of a method 1100” ('444 patent, 14:40-41), and that method 1100 is itself only “*another exemplary embodiment of the invention.*” *Id.*, 14:57-58.⁴

Align stumbles again regarding claims 6, 20, and 34, from which Align also attempts to import into claims 5, 19, and 33 the requirement that the computer select “the largest of the minimum number of stages.” CC Br. 12. Align says these claims show the patent uses the phrases “optimal number of stages” and “largest of the minimum number of stages” “synonymously.” Align Br. 11. But that argument flies in the face of case law holding that different claim terms are presumed to have different meanings. *Bd. of Regents of the Univ. of Tex. Sys. v. BENQ Am. Corp.*, 533 F.3d 1362, 1371 (Fed. Cir. 2008). It is also contradicted by the language that begins claims 6, 20, and 34, which makes clear these dependent claims define one specific way to “determine[e]

⁴ Align’s expert, Dr. Eric Kuo—who has worked with Align for more than 25 years, touts holding more than 150 Align patents, and has been a paid technical advisor to Align for the past 11 years—asserts that “[o]nce a treatment plan has been created, the ‘largest of the minimum number’ of stages can then be objectively identified.” Kuo Decl. ¶ 29. But that misses the whole point: it is precisely in developing the treatment plan that multiple competing considerations come into play to determine how each tooth will move. Indeed, Dr. Kuo expressly agrees with ClearCorrect’s expert Dr. Harrell “that factors such as patient pain tolerance, sensitivity to teeth movement, cost, timing goals, the teeth, patient cooperation, and movement path are relevant in developing a treatment plan.” *Id.*, ¶ 36. Dr. Kuo also cites—and notably does not contradict—Dr. Harrell’s explanation that “orthodontists are likely to give different answers about the optimal number of stages for moving teeth when faced with the same patients.” *Id.*, ¶ 35.

the optimal number of stages”—i.e., a way that involves selecting “the largest number of minimum stages.” Moreover, the steps identified in claims 6, 20, and 34 for determining the largest number of minimum stages (e.g., “dividing the total distance for each dental object by its respective maximum speed”) are absent from the specification embodiment discussed above. So these claims simply disclose *another* embodiment and do not resolve the indefiniteness.

This distinction between claims 5, 19, and 33, on the one hand, and claims 6, 20, and 34, on the other, also shows why Align is wrong to rely on ClearCorrect’s expert declaration in the prior IPR. ClearCorrect’s expert was addressing only claim 6, with its express requirements for how to determine “the optimal number of stages.” Ex. 5, ¶ 106. He never addressed the claims here—claims 5, 19, and 33, which have no such guidance.

Finally, Align’s case law analysis misses the mark. Align cannot distinguish the closest case, *Network System Technologies, LLC v. Texas Instruments Inc.*, 2:22-cv-482-RWS, Dkt. 150 (E.D. Tex. Jan. 3, 2024), where Judge Schroeder found indefinite a claim that required a computer to determine an “optimal amount of data to be buffered.” Align says that case was different because the specification there did not define a “specific meaning” for the claim term. Align Br. 9-10. But as explained above, the specification here does not define a specific meaning either.

Network System also rebuts Align’s argument that even though “determining a treatment plan may involve multiple factors,” the claims are nevertheless definite because “those factors are *objective*.” Align Br. 10. *Network System* involved the same situation: the specification listed various objective “communication or connection properties” that could be used to determine an “optimal amount of data to be buffered.” *Network System* at 53. But Judge Schroeder correctly found the claims indefinite because the intrinsic evidence did not inform a POSITA “how to weight these properties and utilize them together.” *Id.* at 54 (quoting defendant’s expert). The same is

true here. The '444 patent identifies multiple factors for determining the optimal number of stages, including, for example, “the type of pattern needed, the rate, the path, the distance, staggering” ('444 patent, 14:65-15:3),⁵ and Dr. Harrell and the Examiner for Align’s related patent have identified more (Ex. F, ¶¶ 53-56; Ex. E, 10). But the patent provides no “objective boundaries,” *Interval Licensing, LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014), to weigh those factors and know whether the number of stages is “optimal” within the meaning of the patent.

C. The Pattern Terms

With respect to the five pattern terms (all-equal pattern, V-shaped pattern, A-shaped pattern, M-shaped pattern, and mid-line shift pattern), Align *agrees* that “all-equal pattern” should be construed according to its express definition in the specification. *See* CC Br. 15-16. But even though the patent defines the other four pattern terms in the same manner (i.e., appearing in quotation marks and expressly defined in a sequence of parallel paragraphs), Align contends these other terms should not be given those definitions. None of Align’s arguments has merit.

First, Align is wrong that the specification’s use of quotation marks around each pattern term (e.g., “V-shaped pattern”) “makes no difference.” Align Br. 14. The specification’s use of quotation marks followed by a definition is a tell-tale sign that these passages are definitional. *Sinorgchem Co., Shandong v. Int’l Trade Comm’n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007) (“The term ‘controlled amount’ is set off by quotation marks—often a strong indication that what follows is a definition.”); *see* CC Br. 18. *Second*, Align is wrong that the specification’s lead-in language before each definition—“[i]n accordance with one exemplary embodiment of the invention”—supports Align’s argument. As explained (CC Br. 17), that language simply indicates that each

⁵ Align argues that the specification “explains how to assess these factors, *e.g.*, by explaining how to select a treatment pattern,” (Align Br. 8), but as noted above, the specification makes clear that “the type of pattern needed” is just one of many factors that must be considered and balanced for any determination of “the optimal number of stages.” '444 patent, 14:66-67.

defined pattern (e.g., the A-shaped pattern) is itself one embodiment of the overall purported invention. **Third**, the fact that virtually every mention of these terms appears in quotation marks cannot be explained away by saying the quotation marks are merely “for emphasis.” Align Br. 14. Align never explains what is being emphasized, but if anything, the quotation marks emphasize that these are specialized terms—used as expressly defined in the specification.

Fourth, Align’s suggestion that these terms—as of the priority date—had plain meanings is belied by the fact that ClearCorrect and its expert, Dr. Harrell, explained that the pattern terms do not appear in textbooks or papers unrelated to Align and were not taught in orthodontic training. CC Br. 15. Harrell Decl. ¶¶ 47-50. Neither Align nor its expert cites any reference showing a common usage. Indeed, Align seems to recognize its lack of support by making the astonishing assertion that “whether [a pattern term] was in widespread use among orthodontists (or not) circa 2006 is beside the point.” Align Br. 13. To the contrary, a claim term’s meaning “is the meaning that the term would have to a [POSITA] in question at the time of the invention.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005). Dr. Harrell—the only independent expert opining on these terms⁶—explained that these terms lack a common meaning. Harrell Decl. ¶¶ 47-50.

Finally, ClearCorrect’s constructions do not exclude preferred embodiments:

1. “V-Shaped Pattern”⁷

Align wrongly contends that ClearCorrect’s construction of “V-shaped” pattern excludes Figure 5 of the ’444 patent because multiple teeth move simultaneously in that figure. Align Br.

⁶ As noted above, Align’s expert, Dr. Kuo, has worked with Align for more than 25 years. *See* Kuo Decl. ¶ 8. Putting aside Dr. Kuo’s bias, it is not surprising that he—someone who has worked at Align since 1998 (*see id.*)—is aware of the pattern terms Align made up.

⁷ ClearCorrect notes a typographical error in its construction for “V-shaped pattern”, where in one instance “tooth” was inadvertently used instead of “teeth” (as in the patent specification, *see* ’444 patent, 9:12-26). To align the construction with the specification, ClearCorrect revises its construction as follows: “with the next anterior-positioned **teeth** not scheduled to begin moving until at least approximately the half-way stage of its respective posterior-positioned tooth.”

13. Align does not quote ClearCorrect's construction but instead paraphrases it to suggest it requires that "*each tooth* only begins moving after the next most-posterior tooth." *Id.* But ClearCorrect's construction (which mirrors the specification) defines a V-shaped pattern as a "pattern where *teeth* having the same and/or similar positions on the arch will be moved beginning at the same stage." CC. Br. 16. Indeed, ClearCorrect's construction (taken directly from definition in the specification) refers expressly to moving "the most posterior-positioned *teeth*" first "(e.g., the molars, *or teeth in position 7 and/or 8*)." *Id.* Thus, multiple teeth can move at the same time, and ClearCorrect's construction does not prohibit the movement shown in Figure 5.

2. A-Shaped Pattern

Align incorrectly contends that Figures 8 and 9 are "A-shaped" patterns and that ClearCorrect's construction excludes them. Align Br. 15. The specification, however, does not refer to Figures 8 and 9 as depicting A-shaped patterns but rather as *modifications* of A-shaped patterns. The specification states, for example, that "FIG. 8 is a diagram of the exemplary embodiment of FIG. 4 *utilizing a staggering technique*" ('444 patent, 2:40-42) and similarly describes Figure 8 as a *modification* of an A-shaped pattern with the movement of some teeth staggered: "FIG. 8 illustrates an example of the incisors [i.e., the teeth in position 1 (teeth 8 and 9)] of an 'A-shaped' pattern 800 similar to the example of FIG. 4 with the teeth in position 1 (i.e., teeth 8 and 9) being staggered such that they do not collide with the teeth in position 2 (i.e., teeth 7 and 10)" ('444 patent, 12:66-13:3). Yet a movement pattern that is modified to take a different shape than the underlying pattern is no longer that same underlying pattern. For example, Figure 2B and its corresponding description in the specification make clear that after a "pattern to utilize" has been selected (e.g., starting with a A-shaped pattern), the pattern can then "be *modified* to accommodate the teeth movement ... to avoid collision," such as through including staggering or round-tripping (i.e., the movements in Figures 8 and 9). '444 patent, Fig. 2B; *id.* 6:27-30.

ClearCorrect's position is also consistent with how Align itself identified what constitutes an A-shaped pattern. For example, for the means-plus-function claim 23—which requires a “means for ordering the movement of the dental objects in an A-shaped pattern”—the only corresponding structure from the specification that Align cited is Figure 4; *not* Figures 8 and 9. Ex. X [Align's First Amended Disclosure of Proposed Constructions] 9.

3. M-Shaped Pattern

Align contends that ClearCorrect's construction of M-shaped pattern excludes Figure 7, again because certain teeth move simultaneously rather than sequentially. Not so. ClearCorrect's construction (like the specification's definition) states that “*teeth having the same and/or similar positions* on the arch will be moved beginning at the same stage, and will move continuously until they reach their final position.” CC. Br. 16-17. Figure 7 depicts such a pattern, and nothing in ClearCorrect's construction prohibits the teeth in the first and second positions (teeth 7, 8, 9, and 10) from moving simultaneously. Indeed, the remainder of ClearCorrect's construction (like the specification's definition) includes, as an example, teeth in separate positions moving at the same time: “*e.g., the bicuspid*s or teeth in *teeth in positions 4 and/or 5*.”

4. Mid-Line Shift Pattern

Align contends ClearCorrect's construction of “mid-line shift pattern” excludes Figure 6A, because certain teeth move simultaneously. But, like the above, ClearCorrect's construction makes clear that a mid-line shift pattern requires that “tooth movement begins on one side of the patient's arch to center the teeth with respect[] to the mid-line of the patient's mouth, with the *next tooth/teeth* to move not scheduled to begin moving until at least approximately the half way stage of its respective previously scheduled *tooth/teeth*.” CC. Br. at 17. Thus, the definition does not exclude instances when multiple teeth positions move at the same time, as in Figure 6A.

D. The Means-Plus-Function Terms

Of the 179 claims that Align currently asserts against ClearCorrect, the parties agree that 14 claims utilize means-plus-function claiming. Align’s brief fails to rebut ClearCorrect’s showing that Align’s constructions for these claims improperly paraphrase from the specification, and that the specification fails to disclose the algorithms required to perform the function.

1. Align’s Paraphrasing Improperly Seeks To Expand the Means-Plus-Function Terms.

Align does not deny that its proposed constructions for the means-plus-function terms are paraphrases and are not limited to the specification-disclosed structures. But that is something that not allowed by 35 U.S.C. § 112, ¶ 6, which creates a specific bargain for patentees. They may use functional claiming, but the scope of the claims is limited to “*the corresponding structure ... described in the specification* and equivalents thereof.” *Id.*; CC Br. 19.

Align’s constructions fail to comply with the bargain. Instead of identifying structures disclosed in the specification, Align expansively paraphrases those structures to attempt to broaden the claims. Align attempts to justify its paraphrases by arguing that “[b]ecause ‘the specification need not disclose all the details of [an] algorithm,’ it must equally be true that the identified corresponding structure need not quote the specification verbatim.” Align Br. 32-33. But a patentee cannot broaden its claims with constructions that hypothesize broader, generic structures than the actual “corresponding structure ... described in the specification.” 35 U.S.C. § 112, ¶ 6.

Similarly, Align argues that where “the corresponding structure is basic and well-known,” the only thing required in the specification (and in the construction) is “the recitation of the function.” Align Br. 33-34. But as discussed in the following section, Align’s argument is contrary to binding Federal Circuit precedent. Moreover, even if Align were correct that *the specification* does not need to disclose a corresponding structure that is basic and well known, *Align’s construction* still would need to identify that structure. Align cannot do what it proposes here for

terms such as “means for determining a total distance each respective dental object will move,” where Align’s proposed construction is simply “a computer program” for performing that function. That construction does not identify what the supposedly well-known structure from the specification is and therefore attempts to broadly claim *all* means of performing the function. *See Blackboard, Inc. v. Desire2Learn Inc.*, 574 F.3d 1371, 1385 (Fed. Cir. 2009) (“A patentee cannot avoid providing specificity as to structure simply because someone of ordinary skill in the art would be able to devise a means to perform the claimed function.”).

2. The Specification Fails To Disclose Adequate Structure For The Means-Plus-Function Terms.

ClearCorrect’s opening brief, supported by Dr. Xiong’s declaration, explained that the ’444 patent specification fails to disclose the algorithms required to perform the claimed functions as required by precedent like *Aristocrat*. As a general matter, Align often does not even dispute that the specification does not disclose *any* algorithm; Align instead contends that no such disclosure is needed. Align argues, for example, that a patent need not disclose an algorithm if the algorithm needed to perform the function in question would be readily apparent to a POSITA. *See, e.g.*, Align Br. 18, 27 (“[T]he specification’s disclosures, combined with the skilled artisan’s knowledge, adequately conveyed what was necessary to practice this claim limitation.”).

Align’s argument conflates Section 112, ¶ 6’s requirements with those of enablement. The question here is “whether the specification contains a sufficiently precise description of the ‘corresponding structure’ to satisfy section 112, paragraph 6, not whether a person of skill in the art could devise some means to carry out the recited function.” *Aristocrat Techs. Australia Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1336 (Fed. Cir. 2008). Accordingly, Align’s “argument that a person skilled in the art could readily fashion a computer-based means for performing the [claimed] function is the same as the argument that we rejected” in prior cases. *Blackboard*, 574

F.3d at 1385; *see also Atmel Corp. v. Info. Storage Devices, Inc.*, 198 F.3d 1374, 1380 (Fed. Cir. 1999) (“consideration of the understanding of one skilled in the art in no way relieves the patentee of adequately disclosing sufficient structure in the specification”).

Align relies primarily on dicta from *Virtru Corp. v. Microsoft Corp.*, 2023 WL 11799421 (W.D. Tex. Jan. 22, 2023), where the Court ruled that § 112, ¶ 6 did not apply and so never reached the question of whether sufficient algorithms were disclosed. *Id.* at *18, 21. That cannot override binding precedent that “[i]t is not enough for the patentee simply to state or later argue that persons of ordinary skill in the art would know what structures to use to accomplish the claimed function,” there needs to be sufficient structure in the specification. *Aristocrat*, 521 F.3d at 1337.⁸

- a) “means for receiving an electronic representation of each dental object of the plurality of dental objects in relation to one another” (claim 15 and dependents)

Align does not identify *any* algorithm for performing this limitation’s function, instead it states that “none is required” because a “computer’s ability to receive digital images is both undisputed and well-understood.” Align Br. 19. Align relies on *In re Katz*, 639 F.3d 1303 (Fed. Cir. 2011), which created a “‘narrow exception’ to the ‘default rule’ that an algorithm is required” where the claimed functions “are so fundamentally basic that they can be achieved by any general purpose computer without special programming.” *Sisvel*, 82 F.4th at 1366 n.10 (cleaned up). Align argues that the corresponding structure is simply “a computing device,” but ignores that the specification passage it cites describes a computing device “configured to receive an electronic representation.” ’444 patent, 5:12-16. Because the corresponding structure is a *configured* computer device, the structure is different from *Katz*, which involved a general-purpose processor.

⁸ Nor do Align’s other cited cases help Align. For example, *Sisvel International S.A. v. Sierra Wireless, Inc.*, 82 F.4th 1355 (Fed. Cir. 2023), undermines Align’s reading of *Virtru* as it requires that the *specification* disclose at least some details of the algorithm. *Id.* at 1368.

Moreover, nowhere does Align or the specification explain *how* the computer device is configured to receive the representation (e.g., by what port? in what format?). Indeed, like the claims found *invalid* in *Katz*, the function here does not merely require receiving data generally, but instead requires receiving data for teeth *in relation to one another*. *Katz*, 639 F.3d at 1315-1316 (claims reciting “processing means ... based on a condition coupling an incoming call to the operator terminal” found indefinite, notwithstanding claims merely reciting “processing” were found definite). Similar to how a “[c]omputer can be programmed to conditionally couple calls in many ways” (*id.* at 1315), so too may a computer be configured to receive data (including receiving data for dental objects in relation to one another) in many ways (*see* Xiong Decl. ¶ 44; Singh Decl. ¶ 36 (identifying USB ports and WiFi chips as ways to receive information)). The fact that ClearCorrect identified one such way (i.e., via a digital set) in its IPR (Align Br. 20) does not limit the claims to that particular way or make the claim’s boundaries clear. Like the “clearly indefinite” claims in *Katz*, claim 15 leaves the public “left[] to guess” what the claim actually covers.⁹

- b) *“means for determining an order of movement for each respective dental object such that the dental objects avoid colliding with each other ...” (claim 15 and dependents)*

Align fails to identify any algorithm for determining an order of movement so teeth avoid colliding with each other. Align says “that is exactly what Figure 2B depicts with its box reciting ‘TOOTH STAGGERING, ROUND-TRIPPING, AND/OR SLOWING MOVEMENT.’” Align Br. 22. But merely reciting potential options for methods to avoid collisions is hardly an algorithm. *See Ergo Licensing, LLC v. Carefusion 303 Inc.*, 673 F.3d 1361, 1365 (Fed. Cir. 2012) (defining algorithm as a “step-by-step procedure for accomplishing a given result”). Rather, that box from

⁹ ClearCorrect’s argument about “in relation to” was not waived. ClearCorrect argued the specification failed to disclose how the configuration occurs, and the paragraph Align responds to (Xiong Decl. ¶ 44) is cited in ClearCorrect’s brief. *See* CC Br. 23.

Figure 2B is like telling someone to drive to a destination without crashing by performing a combination of right turns, left turns, and going straight. CC Br. 25. This situation is very different from Align’s leading case, *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d 1376 (Fed. Cir. 2011), where the claimed function was disclosed as a specific step-by-step process. *Id.* at 1385.¹⁰

Rather, the situation here is analogous to *Ibormeith IP, LLC v. Mercedes-Benz USA, LLC*, 732 F.3d 1376 (Fed. Cir. 2013). There, as here, the patentee “identifie[d] factors that may be related to [the claimed function], but there is no disclosure of even a single concrete relationship between the various factors that are used to compute an outcome.” *Id.* at 1381. Align says the claim was found indefinite in *Ibormeith* because the patentee merely “identified options for certain variables” (Align Br. 23), but that is exactly what Align does here, when it points only to a box that identifies potential options such as “staggering, round-tripping, **and/or** slowing movement.”¹¹

- c) “means for determining a route each respective dental object will move to achieve its respective final position” (claim 16 and dependents) and “means for determining (a), (b), and (c) in relation to each of the other dental objects” (claim 17 and dependents)

Align contends that the patent discloses sufficient structure for “determining a route each respective dental object will move to achieve its respective final position” because it refers to (1) “segmenting” the initial data set; (2) “calculating transformations that will move the teeth from the initial to the final positions,” and (3) “calculat[ing] one or more of the intermediate positions, taking into account any constraints” or collisions. Align Br. 23-24. But a specification that merely

¹⁰ See, e.g., *id.* (“Cross-referencing entails the matching of entered responses with a library of possible responses, and, if a match is encountered, displaying the fact of the match, otherwise alerting the user, or displaying information stored in memory fields associated with that library entry.”).

¹¹ Align’s expert also contends that “determining the most efficient path”—the last box in Figure 2B—“also contributes to collision avoidance.” Kuo Decl. ¶ 42. But nowhere does the purported structure Align cites describe **how** to determine the most efficient path, which raises additional indefiniteness concerns. Xiong Decl. ¶ 66.

says “segment,” “calculate transformations,” and “calculate intermediate positions” while taking into account constraints and collisions—without giving any details about *how* to do so—is about as far from an algorithm as one can get.¹² This type of disclosure is a poster child for the type of disclosure that the Federal Circuit regularly finds insufficient. *See Blackboard*, 574 F.3d at 1384 (“[T]hat language ‘simply describes the function to be performed.’ It says nothing about how the access control manager ensures that those functions are performed. As such, the language ‘describes an outcome, not a means for achieving that outcome.’”) (citation omitted).

Perhaps recognizing the weakness of the patent’s disclosure, Align falls back to arguing that a “skilled artisan would have understood that software performing the claimed steps ... performs this limitation.” Align Br. 24. But as explained above, that argument conflates Section 112, ¶ 6 with enablement. As in *Blackboard*, Align “cannot avoid providing specificity as to structure simply because someone of ordinary skill in the art would be able to devise a means to perform the claimed function.” 574 F.3d at 1385.¹³

Moreover, with respect to claim 17, the claim is indefinite for at least the above-mentioned reasons. In addition, Align incorrectly contends that ClearCorrect does not dispute the sufficiency of the corresponding structure for the “total distance” and “rate” aspects of this limitation. As Align well knows, ClearCorrect—limited by the number of terms it was able to brief—did not brief all of the terms it considered indefinite. CC Br. 1 n.1; *id.* at Appendix A.

¹² Indeed, Align ignores the vast breadth of ways these general functions could be performed, including, for example, the large number of segmentation algorithms that could be used. *See, e.g.,* Ex. Y, Shervin Minaee, et al., *Image Segmentation Using Deep Learning: A Survey*, 44 IEEE Transactions on Pattern Analysis and Machine Intelligence, 3523 (2022) (“Numerous image segmentation algorithms have been developed in the literature ... such as thresholding, histogram-based bundling, region-growing, k-means clustering, watershed methods...”).

¹³ *See also Ergo Licensing*, 673 F.3d at 1364-65 (“If special programming is required for a general-purpose computer to perform the corresponding claimed function, then the default rule requiring disclosure of an algorithm applies.”).

- d) *“means for determining a rate at which each respective dental object will move along its respective route” (claim 16 and dependents) and “means for determining a total distance each respective dental object will move” (Claim 20)*

While Align agrees that no algorithm is disclosed for these functions, it contends it does not need to describe an algorithm if the algorithm is readily apparent. Align Br. 26-27. But as discussed above, the requirements of Section 112, ¶ 6 and enablement are separate; Align’s reliance on *Virtru* is misplaced; and Align cannot rely on a POSITA to avoid providing specificity as to structure. *See RideApp Inc. v. Lyft, Inc.*, 845 F. App’x. 959, 963 (Fed. Cir. 2021) (rejecting patentee’s argument that because “a skilled artisan, or even a high-school student, could use a formula as simple as the Pythagorean theorem to ascertain the distance between two points” the claim was definite). And even assuming that “rate” simply equals distance / number of stages, Align ignores that there could be multiple ways to determine a distance. For example, the distance a tooth moves might be calculated as the mathematical straight-line distance from initial to final position or the distance the tooth actually followed on the path of the dental arch (and such a calculation may or may not include back-and-forth movements like round-tripping).

Moreover, Align entirely fails to address ClearCorrect’s argument that Align’s identified purported structure cannot be the required “corresponding structure” because it is not clearly linked or associated with the claimed function. *See* CC Br. 30.

- e) *“means for adjusting at least one of the route and the rate of at least one dental object to avoid collision with at least one other dental object” (Claim 18)*

Align contends that the patent discloses adequate structure for performing this limitation based on the specification’s iterative disclosure of staggering, slowing, and round-tripping. Align Br. 28 (citing ’444 patent, 12:57-62). Align’s argument is flawed for multiple reasons.

First, although the specific passage Align cites in its brief (*id.*, 12:57-62) mentions a

potential ordering for the use of staggering, slowing, and round-tripping, the broader passage that Align includes in its construction (*id.*, 12:41-65) refers to other options for adjusting the movement of teeth—i.e., that they “can be suitably applied alone or in combination, and in any order” (*id.*, 12:56-57). Align should not be allowed to broaden its construction by including such passages, which describe an unbounded array of options. **Second**, even with respect to the passage that Align cites in its brief (*id.*, 12:57-62), the mere ordering of staggering, slowing, and round-tripping is incomplete in describing how each of those steps would be used (e.g., how does one go about choosing which teeth to stagger? When does one give up on staggering and move to slowing?). Case law requires much more. *Ibormeith*, 732 F.3d at 1381-82. **Finally**, Align’s argument fails entirely if the claim is interpreted (consistent with its plain language and *SuperGuide*) to require adjusting **both** the rate **and** route. CC Br. 31. The ordering of staggering, slowing, and round-tripping would not adjust both rate and route if the round-tripping step is not reached. Align contends, without support, that *SuperGuide* does not apply because “[e]ach tooth only has one route and can move at and only one rate at a time.” Align Br. 28-29. But the specification makes clear that a tooth can move in different routes (*see* ’444 patent, 6:27-31) and at different rates (*see id.*, 8:19-25), so a selection of route and rate can be made.

f) “means for determining an optimal number of stages for the order of movement of the dental objects” (Claim 19)

Align does not dispute that under Align’s construction for this term—“A computer program that determines an optimal number of stages by selecting the largest number of the minimum number of stages ...”—the computer would need to determine “the minimum number of stages” to perform this element. But Align does not even attempt to identify where in the purported disclosed structure (’444 patent, 15:6-20) an algorithm for determining the minimum number is disclosed. Instead, Align again improperly conflates Section 112, ¶ 6 and enablement,

saying simply that the cited disclosure “adequately conveys what is necessary to practice this limitation.” Align Br. 30. As explained above, that is insufficient. Align also attempts to read claim 20 into claim 19. *Id.* But as discussed in Section II.B, reading these limitations from claim 20 into claim 19 is improper, and in any event, Align’s construction does not identify claim 20 as providing structure for this term, making it improper for Align to rely on claim 20 now.

g) “*means for ordering the movement of the dental objects in a V-shaped pattern*” (claim 22)

Align contends that Figure 5 of the ’444 patent provides sufficient structure for performing the claimed function. But Figure 5 merely shows what a V-shaped pattern looks like, which is the **result** of ordering teeth in a V-shaped pattern. CC Br. 35. Nowhere does the specification describe how the software is programmed to perform the ordering of the necessary movements to achieve the result (i.e., the V-shaped pattern), or, for example, how to create a V-shaped pattern for any particular patient. Contrary to Align’s attempt to distinguish *Aristocrat*, Figure 5—like the figures in *Aristocrat*—merely “describes the outcome of performing the function” and thus does not disclose sufficient structure. 521 F.3d at 1334.

h) “*means for round tripping at least one dental object*” (claim 27)

Align’s reliance on the ’444 patent’s definition of “round-tripping” does not provide sufficient structure to perform the claimed function. The definition merely states the function of “round-tripping” and not a software algorithm for performing the function—there is no disclosure regarding, for example, how the computing system should determine when to initiate round-tripping or how far and in what direction teeth should move when implementing round-tripping in a given patient. Thus, Align’s structure does not provide any limitations on how to perform the defined round-tripping, making the purported structure akin to attempting to “claim all possible means of achieving a function,” which case law forbids. *Blackboard*, 574 F.3d at 1385.

II. THE COMPOSITE IMAGE PATENT

A. “replace [replacing] at least a portion of the [removed] surface portion of the model [...] using the received second scan data [at least a portion of the second scan data]”

Align proposes not construing this term, despite having agreed in previous litigation to the construction ClearCorrect proposes here. Align gives no persuasive reason for its shift in position, and instead merely recycles its same arguments that this Court rejected previously in adopting its preliminary construction in the *3Shape* litigation. The Court should maintain the same construction that Align agreed to in the prior litigation of the same patent.

Align argues that dependent claims 4, 6, and 7 suggest that “replacing” and “registering” are not synonymous and that the construction of this “replacing” claim term therefore should not include “registering.” But here, as in *3Shape*, Align does not articulate any other way that the ’936 patent teaches replacing a portion of the model other than by registering the second scan data after removing the prior scan data, as reflected in ClearCorrect’s proposed construction. In fact, Align quotes Figure 1, which states “registering” is achieved by “replacing.” Align Br. 36.

Align also cites the specification’s “Embodiment A” (14:45-15:36), but that embodiment supports ClearCorrect. Align’s argument is that “replacing” is different from “registering,” but the construction does not equate “replacing” with “registering.” Rather, the construction clarifies, consistent with Embodiment A, that “replacing” a portion of the model using the second scan data means “registering” that data *after also “removing”* the scan data of the removed surface portion.

Align next argues that the Court’s prior *3Shape* construction should be non-binding because “the Court never entered a written Markman order.” Align Br. 36. But Align cites no authority for the Court to reconsider a construction that Align agreed to, after full briefing and a *Markman* hearing, and that differs by only one word from the Court’s preliminary construction.

Finally, Align misrepresents the meet-and-confer process. Align asserts “ClearCorrect

proposed the *3Shape* construction the day before it filed its opening claim construction brief.” *Id.*, 37. In fact, ClearCorrect asked Align months earlier to produce that final claim construction, which is not publicly available. Align did not do so until shortly before ClearCorrect had to file its opening brief, so ClearCorrect relied during the meet-and-confer process on the Court’s publicly available *preliminary* claim construction—which in any event differed from the final construction by only one word (“deleting” became “removing”).

B. “second scan data of the patient’s teeth”

Align—having benefited in the non-instituted IPR by stating that the “second scan data” limitation in the ’936 patent claims refers to new scan data after the patient’s intraoral cavity has physically changed—now mischaracterizes its prior statements to try avoid their impact.

First, Align tries to suggest that its remarks were focused on claims 1 and 9, but not claim 17. Align Br. 37. Yet Align’s statements were not tied to any particular claim but were instead made in the context of a discussion of the claims as a whole, in an attempt to avoid institution. Ex. O at 6. Only later in the brief, starting at page 18, did Align begin the claim-specific arguments it now references. *Id.*, 18. Those additional claim-specific arguments do not limit the clear, unequivocal statements Align made regarding “the claims” as a whole.

Second, Align’s arguments regarding ClearCorrect’s cited cases do not help Align. Align Br. 39. For example, Align does not dispute *Aylus*’s holding that a patent owner’s statements in an IPR proceeding—like Align’s in the IPR for the ’936 patent—are part of the prosecution history and can be relied upon to support a finding of disclaimer. *Aylus Networks, Inc. v. Apple Inc.*, 856 F.3d 1353, 1361 (Fed. Cir. 2017). Align acknowledges (Br. 39), but does not distinguish, ClearCorrect’s other cited cases like *Grecia Estate Holdings LLC v. Meta Platforms, Inc.*, and *Ramot at Tel Aviv Univ. Ltd. v. Cisco Sys., Inc.* Align appears to argue that *David Netzer Consulting Eng’r LLC v. Shell Oil Co.*, 824 F.3d 989 (Fed. Cir. 2016), is distinguishable because

it dealt with a patentee's statements regarding the prior art during prosecution (Br. 39), but Align here made repeated statements to the PTO in the IPR about why the claims were different from, and allowed over, the prior art during prosecution. Align cites no case law suggesting such statements are not binding on the patentee.

Finally, Align argues that "ClearCorrect's assumption that the original Examiner necessarily allowed claim 17 based on claim 1 and 9's 'physical change' requirement also is rank speculation." Align Br. 40. To the contrary, the Examiner stated expressly in his Statement of Reasons for Allowance that the claims were being allowed on the basis that the second scan data must be obtained after "the intra-oral cavity (e.g., dentition) is modified in between the scans" and "data is newly captured and composited to update for the intra-oral modification." Ex. P at ALGN00005589-ALGN00005590. Align did not dispute the Examiner's statement, but instead repeated that same explanation in the IPR. Align's statements constitute a clear and unequivocal disclaimer of claim scope. *See Salazar v. Procter & Gamble Co.*, 414 F.3d 1342, 1346 (Fed. Cir. 2005) ("Examiner's Statement of Reasons for Allowance may help show that the applicant's own arguments ... constitute a clear disavowal of claim scope.").

III. CLEARCORRECT FAITHFULLY FOLLOWED THE COURT'S ORDER

Align wrongly accuses ClearCorrect of acting "in defiance of" and "flout[ing]" the Court's October 29, 2024, Order because ClearCorrect identified 13 additional means-plus-function terms in its Appendix A. As ClearCorrect explained, it faithfully complied with the Order by briefing the 18 allowed terms. But because ClearCorrect contends that there are 23 indefinite terms (in addition to other terms requiring construction), it submitted Appendix A "to preserve ClearCorrect's indefiniteness positions." CC Br. 1 n.1. There is no basis for Align's accusations.

IV. CONCLUSION

For the foregoing reasons, ClearCorrect's constructions should be adopted.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of this document has been served on all counsel of record via electronic mail on December 9, 2024.

/s/ *Melissa R. Smith*

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